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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,779	03/05/2002	Louis J. Lenick	Peer 104	8967

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EXAMINER

JOYCE, WILLIAM C

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,779

Applicant(s)

LENICK ET AL

Examiner

William C. Joyce

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W.C.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the communication filed January 26, 2004 for the above identified patent application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mansfield (USP 3,276,828) in view of Rose (USP 5,059,053).

Mansfield discloses a bearing assembly having an inner ring (1) mounted on a shaft (C), the inner ring having a plurality of fingers defined by slots (6), a compressible locking collar (D) positioned circumferentially about the fingers, the locking collar having a fastener screw operable for causing the locking collar to compress the fingers into locking engagement with the shaft.

Mansfield does not disclose the collar as having a large diameter and a small diameter, wherein the large diameter portion fits circumferentially about the fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. It was known in the art to form a locking collar with a locating portion for positioning the collar with respect to a plurality of locking fingers. For example, Rose teaches a locking collar (20) having a large diameter portion and a small diameter portion, wherein the

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large diameter portion fits circumferentially about a plurality of fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. Referring to the specification (column 4), Rose discloses the small diameter portion illustrated in the Figs. can be modified to have a different shape, length, or width, while still performing its positive stop function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the locking collar of Mansfield with a small diameter portion, as taught by Rose, motivation being to provide means for properly locating the collar member with respect to a plurality of locking fingers.

3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koss et al. (USP 4,403,814) in view of Rose (USP 5,059,053).

Koss et al. disclose a bearing assembly having an inner ring (14) mounted on a shaft (33), the inner ring having a plurality of fingers defined by slots (23), a locking collar (26) positioned circumferentially about the fingers, the locking collar having a fastener screw (29) operable for causing the locking collar to compress the fingers into locking engagement with the shaft.

Koss et al. do not disclose a compressible collar having a large diameter and a small diameter, wherein the large diameter portion fits circumferentially about the fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. It was known in the art to positively lock two machine components using a compressible locking collar having a locating portion for positioning the collar with respect to a plurality of locking fingers. For example, Rose teaches a locking collar (20)

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having a large diameter portion and a small diameter portion, wherein the large diameter portion fits circumferentially about a plurality of fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. Referring to the specification (column 4), Rose discloses the small diameter portion illustrated in the Figs. can be modified to have a different shape, length, or width, while still performing its positive stop function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the locking collar of Koss et al. with a compressible locking collar having large and small diameter portions, as taught by Rose, motivation being to provide means for positively locking two machine components while properly locating the collar member with respect to a plurality of locking fingers.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson (US Patent 5,630,671) in view of Rose (USP 5,059,053).

Larson illustrates in Figure 2 a bearing assembly having an inner ring (36,38) mounted on a shaft (50), the inner ring having a plurality of fingers defined by slots (40), a locking collar (44) positioned circumferentially about the fingers, the locking collar operable for causing the fingers to compress into locking engagement with the shaft.

Larson does not disclose a locking collar having a fastening screw, a large diameter, and a small diameter portion, wherein the large diameter portion fits circumferentially about the fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. It was known in the art to positively lock two machine components using a compressible locking collar having a fastening screw and

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a locating portion for positioning the collar with respect to a plurality of locking fingers. For example, Rose teaches a locking collar (20) having a large diameter portion and a small diameter portion, wherein the large diameter portion fits circumferentially about a plurality of fingers and the small diameter portion defines a radial wall for engaging an end wall of the fingers. Referring to the specification (column 4), Rose discloses the small diameter portion illustrated in the Figs. can be modified to have a different shape, length, or width, while still performing its positive stop function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the locking collar of Larson with a compressible locking collar having a fastening screw and a small diameter portion, as taught by Rose, motivation being to provide a collar having a greater compressing force for positively locking two machine components while properly locating the collar member with respect to a plurality of locking fingers.

Response to Arguments

5. Applicant's arguments filed January 26, 2004 have been fully considered but they are not persuasive.

Applicant argues the clamp of Ross would not be usable on a rotating shaft because of its ears 24 which are located asymmetrically relative to the axis of the shaft, whereby the asymmetric ears would produce an unbalanced assembly and a rotating hazard to workers. First, this argument is not persuasive because it is not commensurate with the scope of the claim because claim 1 does not define the shaft as "rotating." Second, Mansfield does not disclose the shaft as rotating at a "high speed"

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and a slow rotating shaft would not require a balanced clamping device. Further, the rotating shaft of Mansfield may only rotate 20 degrees and therefore would not require a balanced clamping device. With respect to the argument of the ears creating a work place hazard, it is typically required in industry to protect all rotating assemblies with a guard member, and therefore a guarded clamping device would not pose a hazard to a worker. Accordingly, the rejection based on Mansfield or Koss et al. in view of Ross has not been withdrawn.

The prior art to Lawson teaches a shrinking clamping device for causing a plurality of fingers to compress into locking engagement with a shaft. For the reasons given above, it would have been obvious to one of ordinary skill in the art to replace the locking collar of Larson with a compressible locking collar having a fastening screw and a small diameter portion, as taught by Rose, motivation being to provide a collar having a greater compressing force for positively locking two machine components while properly locating the collar member with respect to a plurality of locking fingers.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (703) 305-5114. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William C. Joyce 4/13/04